

REMARKS

I. STATUS OF THE CLAIMS

Claims 1 and 5-63 are pending in this Application. Claims 9-12, 15-17, and 33-63 were withdrawn from consideration by the Examiner. Claims 1, 5-7, 13, 14, 18-21, 23-27, 29, and 30 stand rejected under 35 U.S.C. § 102(b). Claims 1, 5, 13, 14, and 18-32 stand rejected under 35 U.S.C. § 103(a).

II. REJECTION UNDER 35 U.S.C. § 102

The Examiner rejected claims 1, 5-7, 13, 14, 18-21, 23-27, 29, and 30 under 35 U.S.C. § 102(b) as anticipated by U.S. Pat. No. 5,527,838 to Afzali-Ardakani et al. (“Afzali-Ardakani”) for the reasons disclosed at pages 2-3 of the present Office Action. Applicants respectfully traverse this rejection for at least the reasons presented below.

A rejection under Section 102 is proper only when the claimed subject matter is identically described or disclosed in the prior art. *In re Arkley*, 455 F.2d 586, 587 (C.C.P.A. 1972). “For anticipation under 35 U.S.C. § 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly.” M.P.E.P. § 706.02. The identical invention must be described in as complete detail as is contained in, and must be arranged as required by, the claim. M.P.E.P. § 2131. Indeed, in order to anticipate the claimed invention, a reference must “clearly and unequivocally disclose the claimed compound or direct those skilled in the art to the compound without any need for picking, choosing and combining various disclosures.” *In re Arkley*, 455 F.2d at 587. Importantly, the absence of a single element or limitation indicates the reference neither describes nor anticipates the claim. M.P.E.P. § 2131.

As stated in the October 17, 2005, response to the Office Action dated June 16, 2005, incorporated by reference herein in full, *Afzali-Ardakani* fails to expressly or inherently teach a fabric comprising at least one strand comprising a plurality of fibers and having a resin compatible powdered coating composition on at least a portion of a surface of the fabric, the resin compatible powdered coating composition comprising, *inter alia*, a plurality of discrete particles, at least one lubricious material different from the plurality of discrete particles, and at least one film-forming material, wherein the at least one fiber strand comprises at least one glass fiber.

As discussed in Applicants' October 17, 2005, response, the fluorine-containing polymer cited by the Examiner is not a lubricious material. Indeed, the Examiner confirms this in the present Office Action by stating "the prior art does not specifically state the usage of his fluoropolymer as a lubricant. . . ." Office Action dated February 10, 2006, at 6. The Examiner attempts to qualify this statement by noting that this "does not preclude the fluoropolymer from having lubricious properties." *Id.* However, the Federal Circuit has stated that "[m]ere . . . conclusory statements . . . are not sufficient to establish a genuine issue of material fact." *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578 (Fed. Cir. 1993). Therefore, for at least this reason, the Examiner's rejection is erroneous.

Moreover, a close examination of *Afzali-Ardakani* reveals that the material disclosed is a curable material comprising a blend of a fluorine-containing cyanate monomer and a fluorine-containing thermoplastic polymer.¹ See *Afzali-Ardakani*, at

¹ The thermoplastic polymer is also referenced as a modifier in *Afzali-Ardakani*. See, e.g., col. 1, lines 13-16.

Abstract. During the cure of this material, the cyanate monomer reacts with the fluorine-containing polymer to form a resin composed of a cross-linked cyanate network into which the fluorine-containing polymer is incorporated. *Id.*, col. 3, lines 38-41 and col. 7, lines 9-22. Such incorporation involves covalently bonding the thermoplastic monomer to the cyanate monomer. *Id.*, col. 12, lines 37-40 (“Reactive functional groups . . . permit the modifier to be incorporated by covalent bonding into the polymer network structure.”); see also *id.*, col. 7, lines 48-52. The result is a resin that has “outstanding *adhesive* properties.” *Afzali-Ardakani*, col. 2, line 3 (emphasis added); see also *id.*, col. 9, lines 14-15 and col. 10, lines 8-10. Given that adhesives function to “*bond other substances together* by surface attachment,” the Examiner is incorrect in stating that the disclosed fluorine-containing polymer may have lubricious properties. HAWLEY’S CONDENSED CHEMICAL DICTIONARY 22 (14th ed. 2001) (defining adhesive) (emphasis added).

Applicants therefore submit that the rejection is improper and respectfully request that the Examiner withdraw the Section 102(b) rejection of independent claim 1 over *Afzali-Ardakani*, and claims 5-7, 13, 14, 18-21, 23-27, 29, and 30 that depend therefrom.

III. REJECTION UNDER 35 U.S.C. § 103

The Examiner rejected claims 1, 5, 13, 14, and 18-32 under 35 U.S.C. § 103(a) as unpatentable over U.S. Pat. No. 4,340,519 to *Kotera et al.* ("*Kotera*") in view of U.S. Pat. No. 6,346,160 B1 to Puppin ("*Pupp*in"). Applicants respectfully traverse this rejection for the reasons contained in the response dated October 17, 2005, incorporated by reference herein in full, and for at least the reasons that follow.

To establish a prima facie case of obviousness over a combination of references, the Examiner "bears the initial burden of factually supporting any prima facie conclusion of obviousness." *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). Specifically, the Examiner must prove such a desire to combine references with "substantial evidence" that is a result of a "thorough and searching" factual inquiry. *In re Lee*, 277 F.3d 1338, 1343-1344 (Fed. Cir. 2002). The Federal Circuit has on numerous occasions stated that to establish a prima facie case of obviousness an Examiner must show that the references, taken alone or in combination, (1) teach all the present claim limitations; (2) would have suggested to or provided motivation for one of ordinary skill in the art to make the claimed invention; and (3) would have provided one of ordinary skill with a reasonable expectation of success in so making. See *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991) (*citing In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988)). "Both the suggestion and the reasonable expectation of success must be found in the prior art reference, not in the applicant's disclosure." *In re Vaeck* at 1442 (emphasis added).

In the present case, Applicants respectfully submit that the Examiner has failed to establish a prima facie case of obviousness because the Examiner has not shown

that *Kotera* and *Puppín*, in combination, meet all of the aforementioned requirements.

See M.P.E.P. §§2143.01, 2143.02, & 2143.03. Specifically, Applicants maintain that the Examiner cannot demonstrate a suggestion or motivation to modify the teachings of *Kotera* and *Puppín* to make the claimed invention because there is no motivation to combine the teachings of the two references. In fact, both references expressly teach away from the combination.

It is well-settled that claims are not obvious if the cited reference or other relevant art teaches away from the claimed invention. M.P.E.P. § 2145(X)(D)(1). Indeed, the Federal Circuit has held a prior art reference must be considered in its entirety, and one may not “disregard[] disclosures in the references that diverge from and teach away from the invention at hand.” *W.L. Gore & Assocs., Inc., v. Garlock, Inc.*, 721 F.2d 1540, 1550 (Fed. Cir. 1983); see also *Bausch & Lomb, Inc., v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 448 (Fed. Cir. 1986). Thus, the Examiner must consider the entire disclosure of *Kotera* and *Puppín*, including those portions that are inconsistent with the Examiner’s asserted position. See *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000) (“a rejection cannot be predicated on the mere identification in [a prior art reference] of individual components of claimed limitations”).

In an attempt to establish the motivation to combine *Kotera* and *Puppín*, the Examiner states that “depending upon the substrate,” the polyester resin disclosed in *Kotera* “may be incorporated” within a substrate and that such incorporation “necessarily results in resin that gives some degree of an external coating layer.” Office Action dated February 10, 2006, at 7 (emphasis added). Again, the Examiner has failed to make the requisite factual inquiry based on the objective evidence of record. The

Examiner does not cite to any supporting documentary evidence, either from the record or from statutory sources, and, instead, makes a broad, conclusory statement in an attempt to support the Examiner's position. Such statements, however, "are not sufficient to establish a genuine issue of material fact." *McElmurry*, 995 F.2d at 1578.

Kotera expressly teaches that "[a]n object of the present invention is to provide an improved aqueous dispersion of polyester resin which can give a *coating film*. . . ." *Kotera*, col. 2, lines 9-11. *Kotera* also teaches that "[a] further object of the invention is to provide a polyester resin aqueous dispersion for various utilities such as coating compositions, laminated products . . . and surface agent for giving drip-proof." *Kotera*, col. 2, lines 16-21; see also *id.*, col. 7, lines 41-48 ("[t]he polyester resin aqueous dispersion can be used for various utilities . . . particularly [as a] surface treating agent for giving drip-proof").

The Examiner has stated this fact on numerous occasions as well. Office Action dated February 10, 2006, at 7 ("Though *Kotera* may teach that the resin gives an *external coating layer* . . .") (emphasis added); see Office Action dated April 26, 2004, at 4 ("*Kotera* teaches that his composition can be used to *surface treat* plastic and glass products. . .") (emphasis added); see also Office Action dated December 1, 2005, at 4 ("*Kotera*. . . teaches a composition . . . that can be coated *onto* substrates such as glass and used in the formation of windows. . .") (emphasis added). Therefore, as stated in Applicants' October 26, 2004, and October 17, 2005, responses, incorporated by reference herein in full, the *fait accompli* is that the resin in *Kotera* functions as an external coating.

Furthermore, a key component of the resin aqueous dispersion is that it has “excellent water resistance.” *Kotera*, col. 1, lines 4-8 (emphasis added); see also, e.g., Abstract and col. 2, lines 4-5 and lines 52-53; col. 7, lines 46-48; col. 8, lines 14-15 and lines 62-64; and col. 9, lines 8-10; see also *id.* at Examples. The water resistant nature of the coating film is a result of the nonwetting characteristics of the coating. See generally ARTHUR W. ADAMSON AND ALICE P. GAST, PHYSICAL CHEMISTRY OF SURFACES 470 (6th ed. 1997); see also PAUL C. HIEMENZ AND RAJ RAJAGOPALAN, PRINCIPLES OF COLLOID AND SURFACE CHEMISTRY 249-250 (3rd ed. 1997). Nonwetting materials and coatings have high surface tensions and large contact angles.² ADAMSON at 105-07, 465 (stating “nonwetting means that the [contact] angle is greater than 90°”); Cf. HIEMENZ at 270-72 (discussing effects of surface tension on spreading). The result is that nonwetable materials and coatings, such as the coating in *Kotera*, tend to cause liquids to ball up and run off the surface easily.

An examination of the specification and claims of *Puppín*, however, leads one of skill in the art away from a combination with *Kotera*. *Puppín* expressly teaches a composite material comprising a thermoplastic resin and a glass fabric, used in the formation of a linear extrudate as a structural member or as a repair unit. See *Puppín* at Abstract and Summary of Invention. To enhance the contact of the resin with the glass fabric, initially “the glass fiber[s] [are] preferably coated to encapsulate the glass in a coating.” *Puppín*, col. 10, lines 36-37. This coating “increases the wetability [sic] (adjust

² The contact angle is the angle of contact between the liquid and the solid surface. See generally HIEMENZ at 248.

the surface area) of the glass fiber to render the materials more compatible or wettable [sic] with the synthetic resin or resin blend.” *Id.* at lines 37-40 (emphasis added).

Therefore, in contrast to *Kotera*, the coating in *Puppín* acts to lower the surface tension of contacting liquids, which results in contact angles between the contacting liquids and the coated glass fibers of zero or close to zero. ADAMSON at 465-469 (6th ed. 1997) (defining “wetting” as when the contact angle between a liquid and a solid is zero or so close to zero that the liquid spreads over the solid easily). This allows contacting liquids to “wet” the surfaces of the coated glass. Therefore, the effect of coating the glass fibers disclosed in *Puppín* is the ability of the claimed thermoplastic resin to easily spread across the surfaces of glass fibers, thereby ensuring that the thermoplastic resin will wet *all* the available surfaces of the fabric. *Puppín*, col. 4, lines 59-65 (“[T]he resin and [coated] fabric are intimately contacted . . . such that the polymer material, *on a microscopic basis*, coats and flows into the pores, cavity, etc., of the fabric.”).

Such a teaching would clearly lead one skilled in the art away from the combination of *Puppín* with *Kotera*, where the aqueous dispersion of *Kotera* yields a coating that is nonwetable and is not conducive to having a liquid coat the surface. For at least these reasons, the teachings of *Kotera* and *Puppín* cannot be combined in the manner proposed by the Examiner. Accordingly, Applicants request that the present rejections should be withdrawn.

IV. DOUBLE PATENTING

The Examiner has rejected claims 1, 5-8, 13, 14, and 18-32 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, 5-8, 13, 14, 18-32, 44, 46, 47, and 50 of co-pending Application No.

09/620,526. Applicants respectfully wish to draw the Examiner's attention to Applicants' October 17, 2005, response, in which this rejection was addressed.

For convenience, Applicants reiterate that without acquiescing to or agreeing with the Examiner's characterization of the claims, Applicants respectfully request that this rejection be held in abeyance until such time as this application or the other rejected co-pending application is otherwise in condition for allowance.

V. CONCLUSION

In view of the foregoing remarks, Applicants submit that the claimed invention is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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